REMARKS/ARGUMENTS

In the final Office action dated 02/22/2007, Examiner states that it is obvious for a skilled person to combine Norris' teachings and Ninomiya's teachings to teach the claimed features recited in claim 1 of the instant application. The applicant disagrees.

Firstly, the applicant points out that claim 1 recites "based on the power management policy, allocating a **predetermined** ratio of a unit power supply to **each task** according to a category of which each task is associated therewith (*emphasis added*)'. However, the applicant believes that this limitation is neither taught nor suggested by combination of Norris teachings and Ninomiya's teachings.

In col. 5, lines 47-55, Norris teaches "**the predetermined frequencies available through the control panel 70** include the oscillation frequency of the crystal device 30, 1/2 the oscillation frequency of the crystal device 30, 1/4 of the oscillation frequency of the crystal device 30, and 1/8 the oscillation frequency of the crystal device 30. **The control panel 70 enables the user to select any of the predetermined processor clock 32 frequencies for each of the high, medium, and low processor states**". Therefore, the prior art computer system provides the user options for different CPU frequencies, and the user assigns one of the available frequencies to each processor performance state (High, Medium, and Low) through a user interface (i.e., the control panel 70). If the CPU operates at a higher frequency (e.g., the activated processor performance state is High), Norris teaches allocating more power supply amount to the CPU hardware to complete the task with higher computation performance; on the contrary, if the CPU operates at a lower frequency (e.g., the activated processor performance state is Low), Norris teaches allocating less power supply amount to the CPU hardware to complete the task with lower computation performance. However, referring to Norris' teachings, it is readily

understood that the user merely knows the fact that selecting different frequencies means assigning different power supply amount to the CPU hardware for achieving different CPU performance states. Actually, the user has no idea of the tasks to be executed by the CPU hardware during a normal operation of the CPU hardware. In other words, when setting the CPU frequencies to the processor performance states High, Medium, and Low, the user doesn't know the exact ratio of the total power supply amount assigned to the CPU hardware when the CPU hardware enters any of the High, Medium, and Low performance states. In short, regarding the computer system taught by Norris, the actual tasks to be executed by the CPU hardware are never taken into consideration when settings of the frequencies assigned to the processor performance states are made through the user interface. Norris merely discloses adjusting the frequency of the CPU in response to CPU performance requests issued from the tasks (application programs), but fails to teach controlling a predetermined power supply amount allowed to be consumed by the execution of a running task. That is, according to program execution requirements, different tasks (application programs) request the CPU hardware to enter different processor performance states for operating at frequencies preset by the user. However, under the same CPU frequency, different tasks have different power consumptions due to different program codes thereof. Though the computer system taught by Norris provides many CPU frequency options, the actual power consumption for a task executed by the CPU under a specific processor performance state is **unpredictable and incontrollable** according to Norris's teachings.

Briefly summarized, the frequencies corresponding to the processor performance states are not assigned under **known** power supply constraints. Therefore, when setting the CPU frequencies corresponding to the processor performance states, the computer system taught by Norris is unable to allocate **predetermined (known)** power supply amounts to the CPU hardware for tasks that are categorized into different groups. The applicant asserts that Norris fails to teach the claimed feature in claim 1, " allocating a

predetermined ratio of a unit power supply to **each task** according to a category of which each task is associated therewith (*emphasis added*)".

Regarding the other cited reference, Ninomiya discloses allocating an **overall** power supply amount to each of the "power-consumption-variable" components including the CPU; however, Ninomiya doesn't teach allocating a **predetermined** power supply amount or a **predetermined ratio** of the above-mentioned overall power supply amount for **each task** to be executed by the CPU hardware. In col. 3, lines 9-11, Ninomiya discloses "The function for retarding or stopping the CPU clock signal under certain conditions will be hereinafter called a "CPU sleep function". Therefore, when the CPU sleep function is enabled, the CPU clock is reduced or stopped to lower power consumption of the CPU hardware. Moreover, in col. 9, lines 47-58, Ninomiya states " The BIOS prestores a power consumption amount **estimated when the CPU sleep function is enabled**...The above estimated power consumption means a **power consumption amount obtained from an estimated rate of use per unit-hour of each component**". Therefore, provided that the CPU sleep function is enabled, Ninomiya only teaches predicting an **estimated** power consumption of the CPU operating under a lower clock rate according to an **estimated rate of use** of the CPU hardware. In other words, when predicting an estimated power consumption of the CPU hardware for following power control procedure, Ninomiya's computer system doesn't consider the actual tasks (application programs) to be executed by the CPU in advance. That is, the actual tasks (application programs) to be executed by the CPU are out of consideration during the process of predicting the estimated power consumption of the CPU hardware. In short, Ninomiya merely teaches allocating an estimated power supply amount to the CPU

hardware in advance through a prediction manner. Though the execution of the tasks (application programs) is sure to consume some of the estimated power supply amount assigned to the CPU hardware, the actual power consumption of a task currently executed by the CPU, however, is **unpredictable and incontrollable** according to Ninomiya's teachings.

Furthermore, Ninomiya Fig.8 discloses a periodical power control mechanism; however, it also follows the prediction manner to control the estimated power supply amount allocated to the CPU hardware. As stated in col. 11, lines 3-10, Ninomiya teaches " If, on the other hand, they are not equal to each other, the BIOS uses the actual use rate as the estimated one (step 813). Then, the BIOS calculates again an **estimated power consumption** of each power-consumption-variable component on the basis of the renewed **estimated use rate** (step 815). Subsequently, the BIOS corrects the amount of power to be supplied to each power-consumption-variable component (step 817)".

In view of above statements, it is readily understood that the supply power control taught by Ninomiya merely predicts and sets an estimated overall power supply amount to the CPU hardware, but fails to allocate a **predetermined** power supply amount or a **predetermined ratio** of the estimated overall power supply amount for each task to be executed by the CPU hardware. The applicant asserts that the claimed feature in claim 1 "allocating a **predetermined** ratio of a unit power supply to **each task** according to a category of which each task is associated therewith (*emphasis added*)" is neither taught nor suggested by Ninomiya.

As neither of Norris and Ninomiya teaches or suggests allocating a **predetermined** power supply amount or a **predetermined ratio** of the

overall power supply amount for each task to be executed by the CPU hardware, the applicant deeply believes that any reasonable combination based upon Norris' and Ninomiya' teachings still fails to teach the claimed feature. For example, if the power control mechanism taught by Ninomiya is applied to Norris' computer system, the applicant asserts that the resultant combination is to allow Norris' computer system to allocate an overall estimated power supply amount according to an estimated rate of use of the CPU hardware to thereby meet the operation time period required by the user. That is, the combination of Norris' and Ninomiya's teachings is capable of allocating an estimated power supply amount to the CPU hardware according to the user-defined operation time period (see the flow shown in Ninomiya Fig. 4). When the user enables the acceleration of the processor speed through the user interface shown in Norris Fig.4, the clock rate of the CPU is stepped up to increase the processing performance of the application program. However, changing the CPU clock frequency will change the estimated rate of use of the CPU hardware, shortening the actual operation time period of the computer system. In order to extend the operation time period in this case, the power control mechanism disclosed in Ninomiya Fig. 8 can be implemented to make the Norris' computer system periodically calibrate the estimated overall power supply amount allocated to the CPU hardware, thereby guaranteeing the operation time period of the computer system to reach the user-defined threshold. In light of above statements, as neither of Norris' and Ninomiya's power control mechanisms is directed to allocating a predetermined (known) power supply amount for each task executed by the CPU hardware in advance, the applicant believes that claimed feature " based on the power management policy, allocating a **predetermined** ratio of a unit power supply to **each task** according to a category of which each task is associated therewith (*emphasis added*)" is not anticipated

by Norris in view of Ninomiya.

Additionally, claim 19 is an apparatus for performing the method of claim 1, and should be allowed according to the same rationale mentioned above. Clams 2-4, 6-10, 20-22 are dependent upon claims 1 and 19 respectively, and should be allowed if claims 1 and 19 are found allowable. Reconsideration of the finally rejected claims 1-4, 6-10, and 19-22 is respectfully requested.

Sincerely yours,

/Winston Hsu/ Date: 04.20.2007

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